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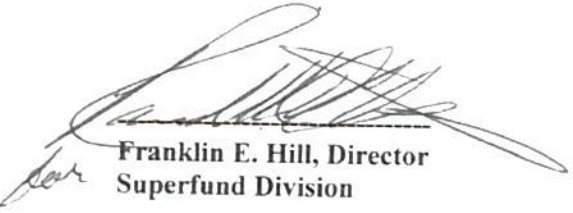
FOURTH FIVE-YEAR REVIEW REPORT FOR  
B&B CHEMICALS CO., INC. SUPERFUND SITE  
HIALEAH, MIAMI-DADE COUNTY, FLORIDA



SEPTEMBER 2017

Prepared by

U.S. Environmental Protection Agency  
Region 4  
Atlanta, Georgia

  
Franklin E. Hill, Director  
Superfund Division

9/19/17  
Date



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## LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
B&B	B&B Tritech Inc. (formerly B&B Chemical Co., Inc)
BLS	Below Land Surface
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
DERM	Miami-Dade County Department of Environmental Resource Management
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FDEP	Florida Department of Environmental Protection
FYR	Five-Year Review
ICs	Institutional Controls
HI	Hazard Index
HRS	Hazard Ranking System
LTM	Long Term Monitoring
MCL	Maximum Contaminant Level
MSL	Mean Sea Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
RAP	Remedial Action Plan
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening levels
SW	Sitewide
UAO	Unilateral Administrative Order
UCL	Upper Confidence Limit
UU/ UE	Unlimited Use and Unrestricted Exposure
VI	Vapor Intrusion
VOC	Volatile Organic Compound
µg/ L	micrograms per liter



## I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)), and considering the EPA policy.

This is the Fourth FYR for the B&B Chemical Co., Inc. Superfund Site (the Site). The triggering action for this **statutory** review is the August 8, 2012 completion date of the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one operable unit (OU) as determined in the September 12, 1994 Record of Decision (ROD). The ROD addresses the groundwater remedy selected for the Site and the entire OU will be addressed in this FYR. On September 5, 1995, EPA issued a Unilateral Administrative Order (UAO) to B&B Tritech, Inc., formerly known as B&B Chemical, directing B&B Chemical to perform the work described in the ROD dated September 12, 1994. The B&B Chemicals Co., Inc. Superfund Site Five-Year Review was led by Shelby Johnston, EPA RPM. Participants included La'Tonya Spencer (EPA Community Involvement Coordinator (CIC)), Bryan Brock (the site owner) and Theresa Pepe (FDEP), Sydney Chan (EPA Risk Assessor) and Galo Jackson (Previous EPA RPM). Relevant entities were notified of the initiation of the FYR. The review began on January 4, 2017.

### Site Background

The Site occupies 5 acres in an industrial area of Hialeah, Miami-Dade County, Florida (Figure 1). Beginning in 1958, B&B Tritech, Inc. (formerly B&B Chemical Co., Inc.) (B&B) manufactured industrial cleaning compounds at the Site. Chemicals and products used by the facility include a variety of solvents, polishes, detergents, oxidizing agents, corrosive inhibitors and metal cleaners. In the mid-1970s, inspectors from the Miami-Dade County Department of Environmental Resource Management (DERM) documented wastewater residues in soakage pits at the Site, and subsequently issued a Cease and Desist Order related to wastewater discharge to the soakage pits.

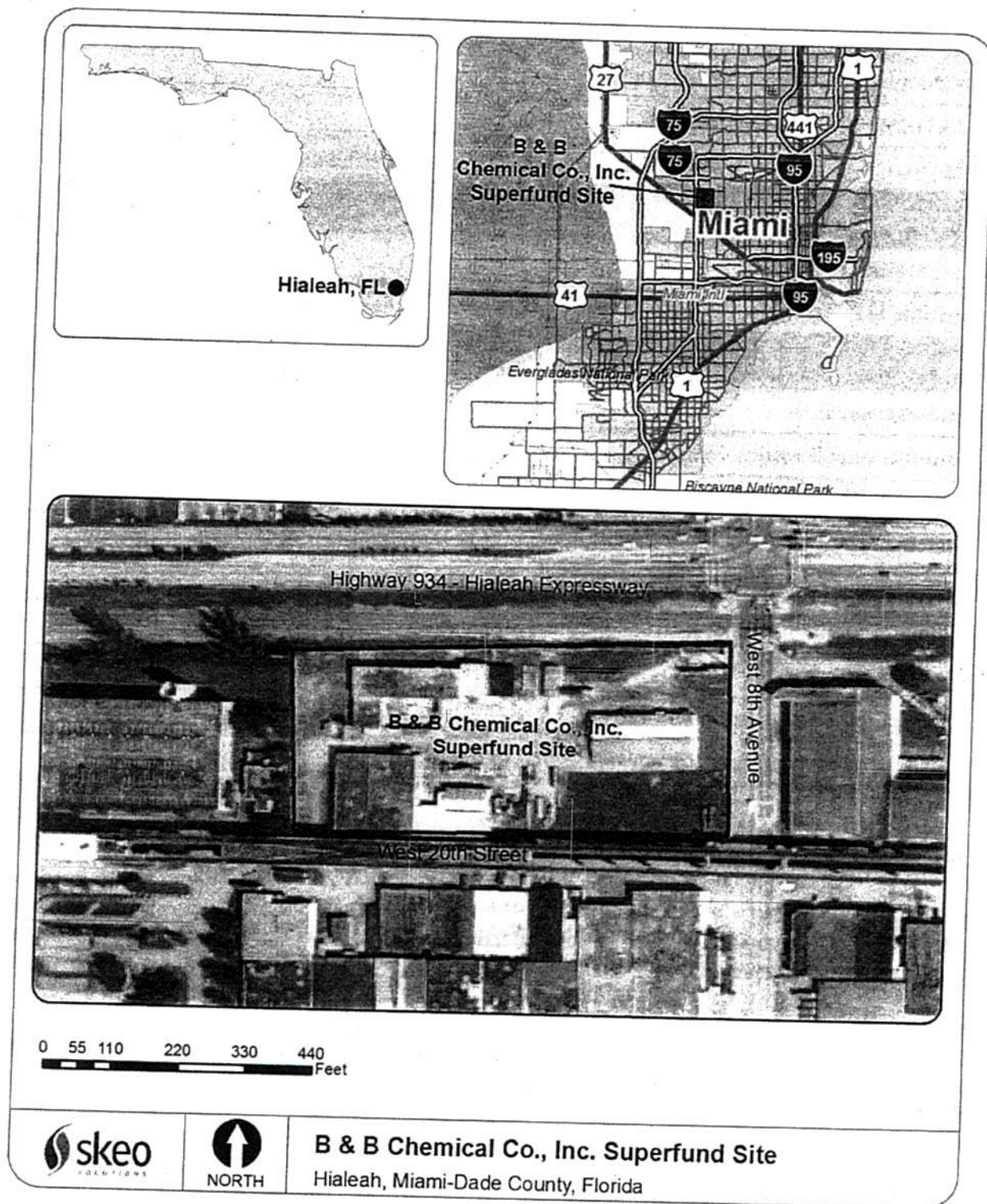
In 1985, at the request of DERM, the EPA conducted an investigation at the Site and found benzene, chlorobenzene, vinyl chloride and chromium in the groundwater. In 1987, B&B completed a Remedial Investigation/Feasibility Study (RI/FS) to determine the type and extent of contamination at the Site. The EPA proposed the Site for inclusion on the National Priorities List (NPL) in 1988. The Site was finalized on the NPL in 1990. Starting in August 1988, B&B operated a groundwater treatment system on site, in accordance with a Court Order of Stipulated Settlement with DERM. The treatment system operated, with some periods of interruption, until 1993.

The B&B facility is still in operation and has continued to be throughout the remedial process but no longer manufactures the industrial cleaning compounds on-site. The planned future use of continued industrial applications is considered compatible with the expected future use of the surrounding



properties which are currently a mix of commercial and industrial.

**Figure 1: Site Location Map**



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. This map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site, and is not intended for any other purpose.

## FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: B&B Chemicals Co.		
EPA ID: FLD004574190		
Region: 4	State: FL	City/County: Hialeah, Miami-Dade County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency:		
Author name: Shelby Johnston		
Author affiliation: EPA		
Review period: 01-04-2017– 7/24/2017		
Date of site inspection: 01-04-2017 by Galo Jackson		
Type of review: Statutory		
Review number: 4		
Triggering action date: 8-08-2012		
Due date (five years after triggering action date): 8-08-2017		

## II. RESPONSE ACTION SUMMARY

### Basis for Taking Action

Chemicals and other products manufactured by B&B include a variety of solvents, polishes, detergents, oxidizing agents, corrosive inhibitors and metal cleaners.

### Response Actions

In the mid-1970s, inspectors from DERM documented wastewater residues in soakage pits at the Site. Subsequent to this, DERM issued a Cease and Desist Order for wastewater discharge to the soakage pits. In May 1976, B&B put a wastewater pre-treatment system into operation. During a 1979 area-wide groundwater study conducted for DERM, two samples were collected from irrigation wells located on the B&B site. Analytical data from these samples indicated the presence of trans-1,2-dichloroethylene, tetrachloroethylene, chlorobenzene, 1,1-dichloroethane, vinylidene chloride and trichloroethylene. In September 1981, construction workers installing a potable water line immediately south of the B&B site experienced skin irritation. Analytical data from a groundwater sample collected in the ditch indicated



the presence of phenol, trichloroethylene, tetrachloroethylene, vinylidene chloride, trans-1,2 dichloroethylene and cis-1,2 dichloroethylene. In June 1982, during the construction of the Metrorail track immediately south of the Site, workers also complained of skin burns while working in the trenches. In October 1983, DERM issued an Administrative Order directing B&B to develop plans for a groundwater monitoring system. DERM filed a civil suit against B&B in November 1984 for the substantial delay in submitting the requested groundwater monitoring plan.

In August 1985, DERM requested that the EPA investigate conditions at the Site. The EPA obtained a warrant from the Federal District Court in Miami to install monitoring wells and to sample groundwater and soils. Results of the 1986 the EPA-funded investigation were used to compute a Hazard Ranking System (HRS) score for groundwater at the Site. The HRS score exceeded the threshold at which sites would normally be placed on the NPL.

B&B completed the RI/FS and a Remedial Action Plan (RAP) with the use of an environmental consulting firm in 1987. The EPA and FDEP found the RI inadequate based on the NCP requirements. Nevertheless, in late 1987, an Order of Dismissal and a Court Order Stipulation of Settlement were signed by DERM and B&B in Dade County Circuit Court. This agreement required the construction and operation of a groundwater recovery and treatment system. Operation of the system started in late August 1988 and continued with some interruptions until May 1993. The system treated more than 37 million gallons of contaminated groundwater.

The EPA proposed the Site for the NPL in June 1988. In April 1989, the EPA sent notice letters to B&B, offering the company the opportunity to conduct a new RI/FS and informing them of their potential liability for all costs associated with the Site. B&B declined to perform an EPA-approved RI/FS. The Site was listed on the NPL in August 1990. In November 1990, the United States District Court for the Southern District of Florida granted the EPA access to the Site, permitting the EPA to obtain environmental samples for the RI/FS. The RI was conducted in 1991. The groundwater sampling for the 1991 RI occurred 32 months after start-up of the groundwater recovery and treatment system.

The 1991 RI detected the highest concentrations of volatile organic compounds (VOCs) in the shallow (7 to 20 feet bls) wells, located in the south-central portion of the Site. Tentatively identified compounds were present at this location at significantly higher concentrations than compounds on the target compound list. Organic compounds with concentrations marginally above Florida or federal maximum contaminant levels (MCLs) included vinyl chloride and benzene. Inorganic contaminants detected above MCLs included cadmium and chromium.

Contaminants of concern (COCs) identified at the Site were constituents commonly associated with chemical manufacturing operations that posed a threat to human health and the environment. The primary COCs identified in the 1994 RI/FS included benzene, chlorobenzene, chromium and vinyl chloride in groundwater.

In the 1992 Baseline Risk Assessment (BRA), the EPA evaluated all potential exposure pathways that could expose human receptors to the various contaminant sources. The following pathways were evaluated under current land use conditions:

- Exposure of on-site workers to contaminants in surface soil through incidental ingestion and dermal contact.



The following pathways were evaluated under future land use conditions:

- Exposure of on-site construction workers to contaminants in surface and subsurface soil through incidental ingestion, dermal contact and inhalation of contaminants in air (dust vapor).
- Exposure of trespassers to contaminants in surface soil through incidental ingestion and dermal contact.
- Exposure of on-site residents to contaminants in groundwater through ingestion, dermal contact and inhalation.

The BRA found that Site groundwater contained concentrations of Site-related contaminants that may pose a risk to human health if the groundwater were used for human consumption. Exceedances of MCLs were observed for several analytes. The BRA concluded that based on risk calculations, the noncarcinogenic and carcinogenic risks related to soil were below the EPA level of concern or benchmark values for risk. Therefore, no remedial goals based on risk were established for soils at the Site. It was concluded in the BRA that leaching of contaminants from contaminated soil was negligible because the vast majority of the Site is covered by impervious material (asphalt and buildings). Because it was assumed that the Site would continue to be covered by impervious material in the foreseeable future, soil remedial goals based on contaminant leaching were not considered. Therefore, no remedial goals were developed for soils based on potential groundwater contamination.

The EPA issued the Site's ROD on September 12, 1994. The Site consists of one OU. The 1994 ROD states that the objectives of the remedy are to mitigate the threat to human health and the environment from exposure to contaminated groundwater in the Biscayne aquifer, to prevent disturbance of the contaminated soil and to monitor groundwater to confirm that natural attenuation of contaminants to levels below federal and Florida MCLs is occurring. In addition, the 1992 FS identified Remedial Action Objectives (RAOs) based on existing or potential hazards identified in the BRA, including:

- Prevent ingestion of water having carcinogen concentrations in excess of federal/state applicable or relevant and appropriate requirements (ARARs) and a total excess cancer risk of greater than  $10^{-6}$ .
- Prevent ingestion of water having noncarcinogen(s) in excess of federal/state ARARs and risk assessment criteria.
- Restore the groundwater system by cleanup to the health-based standards (stated above) and prevent the migration of pollutants beyond the existing limits of the known contaminant plume.
- Prevent ingestion or direct contact with contaminated soil having greater than  $10^{-6}$  excess cancer risk or exceeding public health assessment criteria for noncarcinogens.

The remedy selected in the 1994 ROD consisted of the following remedial components:

- Natural attenuation of groundwater contaminants.
- Monitoring groundwater to verify natural attenuation.
- Implementing institutional controls (ICs) in the form of a notification agreement between the EPA and the landowner to ensure the continued integrity of the asphalt cover.

**Table 1: 1994 ROD Groundwater COC Cleanup Goals**

Groundwater COC	ROD Cleanup Goal (µg/L)
Vinyl chloride	1
Benzene	1
Chlorobenzene	100
Chromium	100
µg/L – micrograms per liter	

In January 2007, the EPA conducted a Site visit to evaluate potential vapor intrusion (VI) issues for each on-Site building. An EPA memorandum, dated February 20, 2007 (Appendix D), concluded that VI is not a risk for existing buildings on the Site. However, any future construction at the Site should consider the potential for VI.

The selected remedy was revised by the June 2009 Explanation of Significant Differences (ESD) to require ICs to ensure the remedy remains protective of human health. In addition, the 2009 ESD removed the 1994 ROD requirement for a final round of groundwater sampling. The 2009 ESD removed this requirement because all monitoring wells had met the performance standards during two consecutive rounds of sampling. Per the ROD, Semiannual groundwater monitoring of select groundwater monitoring wells would be conducted to verify that natural attenuation is occurring. Monitoring would continue until the groundwater contaminant concentrations have decreased to levels below MCLs for two consecutive rounds of semiannual sampling.

The 2009 ESD required that restrictive covenants be placed on the three parcels comprising the Site to:

- Ensure that the integrity of existing impermeable surfaces is maintained.
- Ensure that future use of the property remains commercial or industrial.
- Ensure that the potential for vapor intrusion (VI) into any newly constructed buildings is evaluated and properly addressed.

#### **Status of Implementation**

On September 5, 1995, the EPA issued a UAO that directed B&B to perform the work described in the 1994 ROD. The UAO clarified that the notification agreement requires B&B or the owners of the Site property to provide 60 days written notice prior to disturbing the asphalt/pavement cover or prior to the sale of the property. Remedial design began on September 20, 1995, and was completed on October 18, 1995. The additional ICs established in the 2009 ESD were implemented on May 30, 2013 in a Declaration of Restrictive Covenants recorded with Miami-Dade County (Appendix E).

For the post-ROD groundwater monitoring program, eight wells ranging in depth from 8.56 to 87 feet were selected. The three on-site wells were in the south-central part of the property (the area of historical contamination). The remaining five wells in the Long Term Monitoring (LTM) program were off-site, south and south-east of the contaminated area, which is consistent with the expected groundwater flow direction and observations of contamination during previous monitoring events. On December 7, 1995, B&B initiated groundwater monitoring in accordance with the ROD.

Semi-annual sampling of the groundwater was conducted in accordance with the ROD beginning in



December 1995. The 1994 ROD allowed sampling of any well to be stopped when the well attained the required MCLs for two consecutive rounds of sampling. By January 1999, monitoring had stopped for six of the eight wells. Upon completion of the January 2007 sampling event, the final two wells qualified for stopping semiannual monitoring.

In January 2007, the EPA conducted a Site visit to evaluate potential vapor intrusion (VI) issues for each on-site building. The EPA concluded that VI is not a risk for existing buildings on the Site. However, any future construction at the Site should consider the potential for VI.

After reviewing the results of the 2007 groundwater sampling, FDEP and the EPA determined that the cleanup goals specified in the 1994 ROD had been met and there was no need to continue with regular, semi-annual sampling of the monitoring wells. Further, upon consultation with FDEP, the EPA issued an ESD in 2009 removing the 1994 ROD requirement of a final round of sampling for all monitoring wells associated with the Site.

### **Institutional Controls**

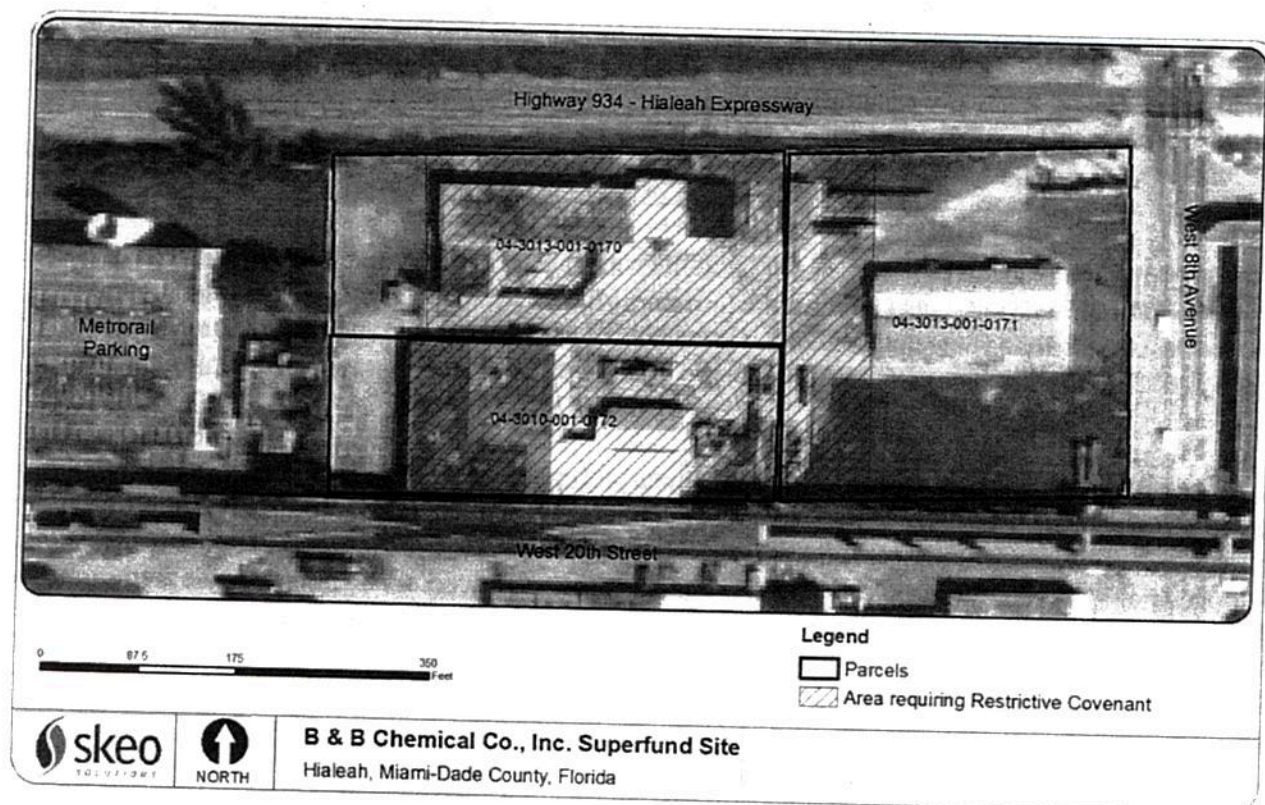
Soils were initially only evaluated for industrial risk which would require site ICs. The Site ESD instituted this requirement for future notice and protection in the case of redevelopment. The March 2017 soil sampling results and the Risk Assessment memorandum has confirmed that the Site soil meets the criteria for UU/UE. To meet the criteria for UU/UE the soils directly below the pavement required updated sampling to screen against the residential screening levels. An ESD will be required to remove the requirement for the paving to be protected and remove the IC requirement from the Site. The EPA, in consultation with FDEP, is evaluating the process to release the May 2013 Declaration of Restrictive Covenants and will determine whether a simple deed notice is warranted to detail the work completed at the Site and considerations for redevelopment. Site property deed documents that have previously acted as institutional controls (ICs) are summarized in Table 2. Figure 2 shows where the restrictions applied on the Site.

**Table 2: Summary of Implemented ICs Cleanup Goals**

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Soils	Yes	Yes	04-3013-001-0170, 04-3013-001-0171, 04-3013-001-0172	<ul style="list-style-type: none"> <li>- Ensure that the integrity of existing impermeable surfaces is maintained.</li> <li>- Ensure that future use of the property remains commercial or industrial.</li> <li>- Ensure that the potential for vapor intrusion (VI) into any newly constructed buildings is evaluated and properly addressed.</li> </ul>	Declaration of Restrictive Covenants, May 30, 2013)



**Figure 2: Institutional Control Map**



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. This map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site, and is not intended for any other purpose.

### **Systems Operations/Operation & Maintenance**

With completion of the monitoring program, long-term O&M has been limited to needed repairs and maintenance of the asphalt areas of the Site. There have not been any needed repairs or maintenance to these areas during the last five years. During the five years since the 2012 FYR and the completion of the monitoring program, no O&M costs have been incurred.

### **III. PROGRESS SINCE THE LAST REVIEW**

During the 2012 FYR it was determined that the remedy at the Site is protective of human health and the environment in the short-term, because groundwater at the Site met performance standards and structures at the Site prevent exposure to remaining source material. However, in order for the remedy to be protective in the long term, institutional controls called for in the Site's decision documents should be implemented to:

- Ensure that the integrity of existing impermeable surfaces is maintained.
- Ensure that future use of the property remains commercial or industrial.
- Ensure that the potential for VI into any newly constructed buildings is evaluated and properly addressed.

**Table 3: Status of Recommendations from the 2012 FYR**

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
SW	Institutional controls called for in the 2009 ESD are not yet implemented.	Implement required institutional controls in the form of a Restrictive Covenant to be recorded by the Site owner in the county land records office.	Completed	Declaration of Restrictive Covenant has been recorded in Miami- Dade County, Fl.	5/31/2013

Sampling was executed March 21 and 22, 2017 on the surficial soil below the pavement on-Site to determine if the soil exceeded the criteria for UU/UE. A total of ten soil samples were collected and analyzed for Total Metals (arsenic, cadmium, chromium III and VI and lead), Semi-volatile Organics and Volatiles. All analytes detected were screened against residential soil Regional Screening Levels (RSLs).

Sampling results for all analytes were at concentrations within the EPA's acceptable risk range based on exposure to residential soils. There was one detection of arsenic above a residential hazard index (HI) of 1. Using a calculated 95% upper confidence limit (UCL) of all March 2017 sampling results for arsenic, the concentration would be below a residential HI of 1. All arsenic concentrations were also within the EPA's acceptable risk range based on risk exposure to commercial workers and below a worker scenario HI of 1. The March 2017 soil analytical sampling results and risk assessment support the determination that the Site has attained UU/UE status (Appendix F).

#### IV. FIVE-YEAR REVIEW PROCESS

##### Community Notification, Involvement & Site Interviews

A public notice was published in the *Miami Today* newspaper announcing the commencement of the FYR process for the Site, on 7/20/2017, stating that there was a five-year review and inviting the public to submit any comments to the EPA (Appendix G). The results of the review and the report will be made available at the Site information repository located at John F. Kennedy Library, located at 190 West 49<sup>th</sup> Street, Hialeah, Florida 33012.

During the FYR process, interviews were conducted with parties impacted by the Site, including the current landowners and regulatory agencies that are involved in site activities or are aware of the Site. The purpose of the interviews was to document the perceived status of the Site and any perceived problems or successes with the phases of the remedy that have been implemented to date. All of the interviews were conducted by email after the January 2017 site inspection. Interviews are summarized below.

Galo Jackson: is Galo Jackson is the EPA former RPM for the Site. Mr. Jackson completed the Site visit to inspect the pavement for cracks and groundwater wells to determine if repair was necessary. Mr. Jackson indicated that the Site is in good repair with no repairs needed to the pavement or groundwater well covers. Mr. Jackson indicated that the site owner has been very cooperative, and he is not aware of any effects of the Site on the surrounding community.

Bryan Brock: Mr. Brock is the Site owner and president of B&B. Mr. Brock believes that the remedial activities were completed smoothly. Mr. Brock believes that the Site has not impacted the surrounding community because the surrounding area is industrial and the Site was deleted.



Mr. Brock stated that he would allow additional sampling of the soil below the pavement for the EPA to assess the status. Mr. Brock feels that the EPA is keeping him informed.

Theresa Pepe: Ms. Pepe from FDEP believes that the Site has met the ROD cleanup goals and the remedy is complete. She has not received any complaints or inquiries about the Site. Ms. Pepe stated that FDEP agrees with the UU/UE determination and the future ESD to clarify the remedy and remove the IC requirements. Ms. Pepe is not aware of any changes to state laws that affect the protectiveness of the Site's remedy.

Shelby Johnston: Shelby Johnston is the EPA RPM for the Site. Mrs. Johnston believes that the project team has been very cooperative, especially the Site owner, making things easier. Mrs. Johnston is not aware of any effects of the Site on the surrounding community and has not received any calls or community concerns regarding the Site. Mrs. Johnston recommended sampling the soil below the pavement to determine if the Site soil meets the criteria for UU/UE. If the contamination in the soil does not exceed the risk range for UU/UE then the FYR requirement can be discontinued.

#### **Data Review**

The March 2017 soil analytical sampling results and risk assessment support the determination that the Site has attained UU/UE status (Appendix F).

#### **Site Inspection**

The inspection of the Site was conducted on 1/4/2017. In attendance were Galo Jackson, RPM, and Bryan Brock, Site owner. The purpose of the inspection was to assess the protectiveness of the remedy. All pavement and building foundations in the area of the RC were in good repair and no further work is anticipated to maintain protectiveness.

### **V. TECHNICAL ASSESSMENT**

**QUESTION A:** Is the remedy functioning as intended by the decision documents?

#### **Question A Summary:**

The review of documents, ARARs, risk assumptions and the site inspection indicate that the site's remedy is functioning as intended. Groundwater performance goals specified in the 1994 ROD were met in 2007. The Restrictive Covenants were finalized May 31, 2013 to ensure long-term protectiveness on the three parcels comprising the Site to:

- Ensure that the integrity of existing impermeable surfaces is maintained.
- Ensure that future use of the property remains commercial or industrial.
- Ensure that the potential for VI into any newly constructed buildings is evaluated and properly addressed.

However, the March 2017 soil analytical sampling results and risk assessment support the determination that the Site has attained UU/UE status. The March 2017 soil sampling results and the Risk Assessment memorandum has confirmed that the Site soil meets the criteria for UU/UE. To meet the criteria for UU/UE, the soils directly below the pavement required updated sampling to screen against the residential screening levels. An ESD will be required to remove the requirement for the paving to be protected and remove the IC requirement from the Site. The EPA, in consultation with FDEP, is



evaluating the process to release the May 2013 Declaration of Restrictive Covenants and will determine whether a simple deed notice is warranted to detail the work completed at the Site and considerations for redevelopment.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

The exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of remedy selection are still valid. Groundwater cleanup levels were based on federal National Primary Drinking Water Regulations and Florida MCL values, and there have been no changes in these ARARs since the remedy was selected. Any changes in toxicity factors would not call into question the protectiveness of the remedy because the cleanup levels for groundwater were based on the MCLs. Therefore, the cleanup levels remain valid.

**QUESTION C:** Has any **other** information come to light that could call into question the protectiveness of the remedy?

No other information has come to light that could call into question the protectiveness of the remedy.

## VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
none

## VII. PROTECTIVENESS STATEMENT

Sitewide Protectiveness Statement
<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at the Site is protective of human health and the environment.

## VIII. NEXT REVIEW

No further five-year reviews are planned for the B&B Chemicals, Co. Superfund Site because all site-impacted media have reached UU/UE.

## **APPENDIX A – REFERENCE LIST**

- The EPA Record of Decision: B&B Chemical Co., Inc. EPA ID: FLD004574190. Prepared by EPA Region 4. September 12, 1994.
- The EPA Explanation of Significant Differences: B&B Chemical Co., Inc. EPA ID: FLD004574190. Prepared by EPA. June 12, 2009.
- Third Five-Year Review Final Report: B&B Chemical Co., Inc. Superfund Site, Hialeah, Miami-Dade County, Florida. Prepared by Skeo Solutions for the EPA, August 2012
- Memorandum from Jan B. Rogers, RPM. B&B Chemical Company, Hialeah, FL Vapor Intrusion Considerations. December 19, 2006.
- Memorandum from Sydney B. Chan, Risk Assessor B&B Chemical Company, Hialeah, FL Analytical Data from March 2017. July 11, 2017.
- Memorandum from Laura Ackerman, Superfund ands Air Section Chief, Provisional Release of Data, B&B Chemical, Science and Ecosystem Support Division Project Identification Number: 17-0278. April 25, 2017.
- Memorandum from Laura Ackerman, Superfund ands Air Section Chief, Provisional Release of Final Metals Data B&B Chemical, Science and Ecosystem Support Division Project Identification Number: 17-0278. May 24, 2017.

## APPENDIX B – CURRENT SITE STATUS

### Environmental Indicators

- Current human exposures at the Site are under control.
- The Site is not a groundwater site.

### Are Necessary Institutional Controls in Place?

☒ All ☐ Some ☐ None

### Has the EPA Designated the Site as Sitewide Ready for Anticipated Use?

☒ Yes ☐ No

### Has the Site Been Put into Reuse?

☒ Yes ☐ No



## APPENDIX C – SITE CHRONOLOGY

**Table C-1: Site Chronology**

Event	Date
Miami-Dade County Department of Environmental Resource Management (DERM) issued Cease and Desist Order for wastewater soakage pits	Mid-1970s
B&B Chemical Co., Inc. began operation of a wastewater pretreatment system	May 1976
DERM Administrative Order directed B&B Chemical Co., Inc. to plan ground water monitoring	October 1983
DERM filed civil suit alleging substantial delay in submitting ground water monitoring plan	November 1984
DERM requested that EPA investigate the Site	August 1985
Initial discovery	October 10, 1985
FDEP conducted site inspection	July 21, 1986
EPA completed preliminary assessment	November 19, 1987
EPA proposed the Site for listing on the National Priorities List (NPL)	June 24, 1988
EPA began remedial investigation/feasibility study (RI/FS)	September 13, 1989
EPA finalized the Site on the NPL	August 30, 1990
EPA completed removal assessment	August 25, 1992
EPA conducted ecological risk assessment	October 5, 1992
EPA conducted risk/health assessment	September 12, 1994
EPA completed RI/FS	September 12, 1994
EPA signed Record of Decision (ROD)	September 5, 1995
EPA issued Unilateral Administrative Order (UAO)	September 20, 1995
PRP began remedial design	October 18, 1995
PRP completed remedial design	December 7, 1995
PRP began remedial action	September 1, 1999
PRP completed remedial action	October 24, 2001
PRP began long-term response action	February 20, 2007
First FYR signed	April 26, 2007
EPA conducted a vapor intrusion study	June 12, 2009
Second FYR signed	August 9, 2012
EPA issued Explanation of Significant Differences (ESD)	July, 29, 2013
Third FYR signed	August 7, 2013
Restrictive Covenant recorded in Miami Dade county	August 5, 2014
The EPA Final Close out Report approved	March 21 and 22, 2017
Site deleted from the NPL	July 11, 2017
Soil sampling below the pavement to determine UU/UE	
Site determined eligible for UU/UE by sampling results and risk assessment	

## APPENDIX D – PRESS NOTICE



The U.S. Environmental Protection Agency, Region 4  
Announces the Fourth Five-Year Review for  
the B & B Chemical Company Superfund Site,  
Hialeah, Miami-Dade County, Florida

**Purpose/Objective:** EPA is conducting a Five-Year Review of the remedy for the B & B Chemical Superfund site (the Site) in Hialeah, Florida. The purpose of the Five-Year Review is to ensure that the selected cleanup actions effectively protect human health and the environment.

**Site Background:** The 4.5-acre Site is located at 875 West 20th Street, in a light industrial area. Prior to 1963, B&B Chemical Company's products were mixed off site by a company in Atlanta, Georgia. The company began mixing products at the site in early 1963. Since 1989, B&B Chemical Company has been known as B&B Tritech, Inc.; the ownership of the company has remained unchanged. Chemicals and other products known to have been manufactured by B&B Chemical Company include a variety of solvents, polishes, detergents, oxidizing agents, corrosive inhibitors and metal cleaners. In the mid-1970s, inspectors from the Dade County Department of Resource Management (DERM) documented the presence of wastewater residues in soakage pits at the Site, and subsequently issued a Cease and Desist Order related to wastewater discharge to the soakage pits. In May 1976, B&B Chemical Company began operating a wastewater treatment system at the Site. In 1985, EPA conducted a site investigation at the request of DERM and found solvents in ground water. Following additional site investigations, EPA proposed the Site for inclusion on the National Priorities List (NPL) in 1988; the Site was finalized on the NPL in 1990. Primary contaminants of concern at the Site include vinyl chloride, benzene, chlorobenzene and chromium in soil and ground water.

**Cleanup Actions:** EPA designated one operable unit (OU) to address the Site's soil and ground water contamination. EPA signed the Site's Record of Decision in September 12, 1994, selecting a remedy to treat the Site's soil contamination. The major components of the remedy included monitored natural attenuation of ground water contaminants and institutional controls for the south-central portion of the Site.

**Five-Year Review Schedule:** The National Contingency Plan requires that remedial actions that result in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure the protection of human health and the environment. The third of the Five-Year Reviews for the Site will be completed by August 2017.

**EPA Invites Community Participation in the Five-Year Review Process:** EPA is conducting this Five-Year Review to evaluate the effectiveness of the Site's remedy and to ensure that the remedy remains protective of human health and the environment. As part of the Five-Year Review process, EPA staff members are available to answer any questions about the Site. Community members who have questions about the Site or the Five-Year Review process, or who would like to participate in a community interview, are asked to contact:

Shelby Johnston, EPA Remedial Project  
Phone: (404) 404-562-8287  
E-mail: [johnston.shelby@epa.gov](mailto:johnston.shelby@epa.gov)

Manager L'Tonya Spencer, EPA Community Involvement Coordinator  
Phone: (404) 562-8463 / (800) 435-9233 (toll-free)  
E-mail: [spencer.latonya@epa.gov](mailto:spencer.latonya@epa.gov)

Mailing Address: U.S. EPA Region 4, 61 Forsyth Street, S.W., 11th Floor, Atlanta, GA 30303-8960

Additional site information is available at the Site's local document repository, located at John F. Kennedy Library, 190 West 49th Street, Hialeah, FL 33012 and online  
at: <https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0400566&msspp=med>

*Published July 20, 2017*



4. (a) **Reserved rights of Grantors:** Grantors hereby reserve unto themselves, their successors, heirs, and assigns, all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, rights and covenants granted herein.
- (b) **Reserved Rights of EPA:** Nothing in this document shall limit or otherwise affect EPA's rights of entry and access or EPA's or authority to take response actions under CERCLA, 42 U.S.C. §9601, *et seq.*, the National Contingency Plan (NCP), 40 C.F.R. Part 300, *et seq.*, or other federal law.
- (c) **Reserved Rights of Grantee:** Nothing in this document shall limit or otherwise affect Grantee's rights of entry and access or authority to act under state or federal law.
5. **Notice requirement:** Grantors agree to include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

**NOTICE: THE INTEREST CONVEYED HEREBY IS  
SUBJECT TO A DECLARATION OF RESTRICTIVE AND  
AFFIRMATIVE COVENANTS, DATED \_\_\_\_\_, 20 \_\_,  
RECORDED IN THE PUBLIC LAND RECORDS ON  
\_\_\_\_\_, 20 \_\_, IN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_, IN  
FAVOR OF, AND ENFORCEABLE BY, THE STATE OF  
FLORIDA DEPARTMENT OF ENVIRONMENTAL  
PROTECTION.**

Within thirty (30) days of the date any such instrument of conveyance is executed, Grantors must provide Grantee and EPA with a certified true copy of said instrument and, if it has been recorded in the public land records, its recording reference.

6. **Administrative Jurisdiction:** FDEP or any successor state agency having administrative jurisdiction over the interests acquired by the State of Florida by this instrument is the Grantee. EPA is a third party beneficiary to the interests acquired by Grantee.
7. **Enforcement:** The Grantee shall be entitled to enforce the terms of this instrument by resort to specific performance or legal process. The restrictions may also be enforced in a court of competent jurisdiction by any other person, firm, corporation or governmental agency that is substantially benefited by this Declaration. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. It is expressly agreed that EPA is not the recipient of a real property interest but is a third party beneficiary of the Declaration of Restrictive Covenants, and as such, has the right of enforcement. Enforcement of the terms of this instrument shall be at the discretion of the entities listed above, and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument

- b. There shall be no stormwater swales, stormwater detention or retention facilities, or ditches constructed on the Property unless previously approved by FDEP.
  - c. For any dewatering activities, a plan must be submitted and approved by FDEP to address and ensure the appropriate handling, treatment, and disposal of any extracted groundwater that may be contaminated
  - d. On-site engineering controls, including buildings, concrete slabs, and pavement on the Property, as identified in **Exhibit B**, shall be maintained. This restriction may only be modified pursuant to Paragraph 3 of this Declaration. Should future development require the disturbance of on-site engineering controls, additional response actions may be necessary. For any construction activities, a plan must be submitted and approved by FDEP and EPA to address and ensure the appropriate management of any contaminated soils that may be encountered. In addition, prior to undertaking new construction or substantial modification of existing structures on the Property, the Property owner shall conduct preconstruction sampling to ensure that existing soil contaminant concentrations beneath the proposed new or modified structure do not pose an exposure risk to future occupants through vapor intrusion. Additional design and construction techniques that prevent a completed vapor intrusion exposure pathway into the interior of a proposed new or modified structure shall be used if warranted by the pre-construction sampling results.
2. **Irrevocable Covenant for Site Access:** Grantors hereby grant to the Grantee and EPA, and Grantee and EPA's agents and representatives, an irrevocable, permanent and continuing right of access at all reasonable times to the Property for purposes of:
- a) Implementing the response actions in the ROD and ESD;
  - b) Verifying any data or information submitted to EPA and Grantee;
  - c) Verifying that no action is being taken on the Property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;
  - d) Monitoring response actions on the Property and conducting investigations relating to contamination on or near the Property, including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;
  - e) Conducting periodic reviews of the remedial action, including but not limited to, reviews required by applicable statutes and/or regulations; and
3. **Modification:** This Declaration shall not be modified, amended, or terminated without the written consent of FDEP or its successor agency. FDEP shall not consent to any such modification, amendment or termination without the written consent of EPA.



## APPENDIX E- INSTITUTIONAL CONTROLS

CFN: 20130593888 BOOK 28746 PAGE 2851

DATE: 07/29/2013 02:50:31 PM

HARVEY RUVIN, CLERK OF COURT, MIA-DADE CTY

This instrument prepared by:  
Bryan Brock  
B&B Tritech, Inc.  
875 West 20<sup>th</sup> Street  
Hialeah, FL 33010

REDACTED

### DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS ("Declaration") is given this 10 day of June, 2013, by William B. Brock, Jr. and Isabel K. Brock ("Grantors"), having a mailing address of \_\_\_\_\_ to the State of Florida Department of Environmental Protection ("FDEP" or "Grantee").

### RECITALS

- A. **WHEREAS**, Grantors are fee simple owners of three parcels of land situated in the county of Miami-Dade County, State of Florida, more particularly described in Exhibit "A" attached hereto and made a part hereof (hereinafter the "Property");
- B. **WHEREAS**, The Property subject to this restrictive covenant is a portion of the property known as the B&B Chemical Superfund Site ("Site"), which the U.S. Environmental Protection Agency ("EPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, proposed for the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on June 24, 1988. The EPA Site Identification Number for the Property is FLD004574190.
- C. **WHEREAS**, in a Record of Decision ("ROD") dated September 12, 1994, and an Explanation of Significant Differences ("ESD"), dated June 12, 2009, the EPA Region 4 Regional Administrator selected the "remedial action" for the Site. The release of benzene, chlorobenzene, vinyl chloride, and other hazardous substances, pollutants or contaminants on the Property is documented in the following EPA records:
1. EPA Superfund Record of Decision, EPA/ROD/R04-94/185 1994 (dated September 12, 1994).
  2. Explanation of Significant Differences, dated June 12, 2009, modifying EPA/ROD/R04-94/185 1994.
  3. Unilateral Administrative Order for Remedial Action, EPA Docket No. 95-30-C, dated September 22, 1995.
- D. **WHEREAS**, a remedial action selected pursuant to the ROD was performed on the Site.
- E. **WHEREAS**, contaminants in excess of allowable concentrations for unrestricted use will remain at the Property after completion of the remedial action.

Exemption 7  
(A) Interference with Enforcement Proceedings  
(B) Right to Fair Trial  
(C) Unwanted Invasion of Personal Privacy

- F. **WHEREAS**, it is the intent of the restrictions in this Declaration to reduce or eliminate the risk of exposure of the contaminants to the environment and to users or occupants of the Property and to reduce or eliminate the threat of migration of the contaminants.
- G. **WHEREAS**, it is the intention of all parties that EPA is a third party beneficiary of said restrictions and said restrictions shall be enforceable by the EPA, FDEP, and their successor agencies.
- H. **WHEREAS**, the parties hereto have agreed 1) to impose on the Property use restrictions as covenants that will run with the land for the purpose of protecting human health and the environment; and 2) to grant an irrevocable right of access over the Property to the Grantee and EPA, and Grantee and EPA's agents or representatives, for purposes of implementing, facilitating and monitoring the remedial action; and
- I. **WHEREAS**, Grantors deem it desirable and in the best interest of all present and future owners of the Property that the Property be held subject to certain restrictions and changes, that will run with the land, for the purpose of protecting human health and the environment, all of which are more particularly hereinafter set forth.

**NOW THEREFORE**, Grantors, on behalf of themselves, their successors, heirs, and assigns, in consideration of the recitals above, the terms of the ROD and ESD, and other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, do hereby covenant and declare that the Property shall be subject to the restrictions on use set forth below, which shall touch and concern and run with the title of the Property, and does give, grant and convey to the Grantee, and its assigns, 1) an irrevocable use restriction and site access covenant of the nature and character, and for the purposes hereinafter set forth, and 2) the perpetual right to enforce said covenants and use restrictions, with respect to the Property. Grantors further agree as follows:

- a. The foregoing recitals are true and correct and are incorporated herein by reference.
- b. Grantors hereby impose on the Property the following restrictions:
  - 1. **Restrictions on use:** The following covenants, conditions, and restrictions apply to the use of the Property:
    - a. The Property shall only be used for industrial purposes. There shall be no agricultural use of the land including forestry, fishing and mining; no hotels or lodging; no recreational uses including amusement parks, parks camps, museums, zoos, or gardens; no residential uses, and no educational uses such as elementary and secondary schools, or day care services. The restrictions may only be modified pursuant to Paragraph 3 of this Declaration. If the Property is to be used other than for industrial purposes, FDEP may require additional response actions.



REDACTED

shall not be deemed to be a waiver by the Grantee of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Grantee under this instrument.

8. **Damages:** Grantee shall be entitled to recover damages for violations of the terms of this instrument, or for any injury to the remedial action, to the public or to the environment protected by this instrument.
9. **Waiver of certain defenses:** Grantors hereby waive any defense of laches, estoppel, or prescription.
10. **Covenants:** Grantors hereby covenant to and with the Grantee, that the Grantors are lawfully seized in fee simple of the Property, that the Grantors have a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on Exhibit C attached hereto.
11. **Notices:** Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, referencing the Site name and Site ID number and addressed as follows:

**To Grantors:**

William and Isabel Brock  
Name(s)  
\_\_\_\_\_  
Street  
\_\_\_\_\_  
City/State/Zip Code

**To Grantee:**

Bureau Chief, Waste Cleanup  
Florida Dept. of Environmental Protection  
FDEP M.S. 4505  
2600 Blair Stone Road  
Tallahassee, FL 32399

Exemption 7 \_\_\_\_\_ (A) Interference with Enforcement Proceedings  
\_\_\_\_\_ (B) Right to Fair Trial  
☒ (C) Unwanted Invasion of Personal Privacy

**To EPA:**

U.S. EPA, Region 4  
Superfund Division  
Chief, Superfund Remedial and Site Evaluation Branch  
61 Forsyth Street, SW  
Atlanta, GA 30303

with copy to:

U.S. EPA, Region 4  
Office of Environmental Accountability  
Branch Chief, CERCLA Legal Support  
61 Forsyth Street, SW  
Atlanta, GA 30303

Exemption 6 Personal Privacy

12. **Recording in Land Records:** Grantors shall record this Declaration of Restrictive and Affirmative Covenants in timely fashion in the Official Records of Miami-Dade County, Florida, with no encumbrances, other than those noted in Exhibit C attached hereto, and shall re-record it at any time Grantee may require to preserve its rights. Grantors shall pay all recording costs and taxes necessary to record this document in the public records.
13. **General provisions:**
  - a. **Controlling law:** The interpretation and performance of this instrument shall be governed by the laws of the United States or, if there are no applicable federal laws, by the law of the state where the Property is located.
  - b. **Liberal construction:** Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of CERCLA. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.
  - c. **Severability:** If any provision of this instrument, or the application of it to any person or circumstance, is found to be invalid, the remainder of the provisions of this instrument, or the application of such provisions to persons or circumstances other than those to which it is found to be invalid, as the case may be, shall not be affected thereby.
  - d. **Entire Agreement:** This instrument sets forth the entire agreement of the parties with respect to rights and restrictions created hereby, and supersedes all prior discussions, negotiations, understandings, or agreements relating thereto, all of which are merged herein.
  - e. **No Forfeiture:** Nothing contained herein will result in a forfeiture or reversion of Grantors' title in any respect.
  - f. **Joint Obligation:** If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.
  - g. **Successors:** The term "Grantors" wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantors" and their personal representatives, heirs, successors, and assigns. The term "Grantee" wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantee" and their personal representatives, heirs, successors, and assigns including any successor state agency to FDEP having administrative jurisdiction over the interests acquired by the State of Florida under this instrument. The rights of the Grantee and Grantors under this instrument are freely assignable, subject to the notice provisions hereof.



h. Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

i. Counterparts: The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling

**TO HAVE AND TO HOLD** unto the State of Florida Department of Environmental Protection and its successors and assigns forever.

**IN WITNESS WHEREOF**, Grantors have caused this Agreement to be signed in their names. Executed this 10 day of June, 2013.

**GRANTORS:**

William B. Brock

Isabel K. Brock

Signed, sealed and delivered in the presence of:

Doris W. Smith  
Witness:

Doris W. Smith 6-10-13  
Print Name Date

Benita Phillips  
Witness:

Benita Phillips 6/10/13  
Print Name Date

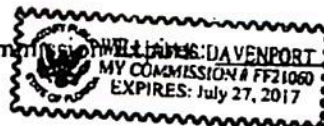
**STATE OF FLORIDA, COUNTY OF** Miami-Dade

On this 10 day of June, 2013, before me, the undersigned, a Notary Public in and for the State of Florida, duly commissioned and sworn, personally appeared William B. Brock and Isabel K. Brock the individuals that executed above the foregoing instrument, and acknowledged the said instrument to be a free and voluntary act, for the uses and purposes therein mentioned, and on oath stated that each is authorized to execute said instrument as Grantors.

Witness my hand and official seal hereto affixed the day and year written above.

William K. Davenport  
Notary Public in and for the  
State of Florida

My Comm.



Approved as to form by the Florida Department of Environmental Protection,  
Office of General Counsel.

By: Mary C. Stewart 7/9/2013  
Print Name/Title: Mary C. Stewart, Senior Assistant General Counsel

IN WITNESS WHEREOF, the Florida Department of Environmental Protection has executed  
this instrument, this 25<sup>th</sup> day of JULY, 2013.

Florida Department of Environmental Protection

Jorge Caspary  
Jorge Caspary, Director  
Division of Waste Management  
2600 Blair Stone Road  
Tallahassee, FL 32399

Signed, sealed and delivered in the presence of:

<u>Daniel S. Shores</u>	<u>Daniel S. Shores</u>	<u>07/25/2013</u>
Witness:	Print Name	Date
<u>Sharon Lee</u>	<u>Sharon Lee</u>	<u>7/25/13</u>
Witness:	Print Name	Date

STATE OF FLORIDA, COUNTY OF LEON

On this 25<sup>th</sup> day of JULY, 2013, before me, the undersigned, a Notary Public in and for the State of Florida, duly commissioned and sworn, personally appeared Jorge R. Caspary, known to be the Secretary of the Florida Department of Environmental Protection, the State Agency that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument.

Witness my hand and official seal hereto affixed the day and year written above.



JUDITH PENNINGTON  
MY COMMISSION # EE 622632  
EXPIRES: September 10, 2014  
Served Three Budget Policy Services

Judith Pennington  
Notary Public in and for the  
State of Florida

My Commission Expires: SEPTEMBER 10, 2014



**ATTACHMENTS:**

- Exhibit A - Legal Description of the Property**
- Exhibit B - Restricted Parcels Map**
- Exhibit C - Encumbrances**

**EXHIBIT "A"**  
**Legal Description of the Property**

**Parcel No.: 04-3013-001-0170**

Address: 2051 W 9<sup>th</sup> Avenue, Hialeah, Florida

Warranty Deed: June 1, 1970, Official Records Book 6874 Page 39

**Legal Description:**

The North  $\frac{1}{2}$  of the West  $\frac{1}{2}$  of the East 660 feet of Tract 17, of FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1, in Section 13, Township 53 South, Range 40 East, according to the Plat thereof, as recorded in Plat Book 2, at Page 17, of the Public Records of Miami-Dade County, Florida, And the portion of a 60 foot right-of-way known as West 9<sup>th</sup> Avenue running from West 20<sup>th</sup> Street to West 21<sup>st</sup> Street, being the West 30 feet of the East  $\frac{1}{2}$  of Tract 17 and the East 30 feet of the West  $\frac{1}{2}$  of Tract 17, by Ordinance No. 82-44 filed June 16, 1982, recorded in Official Records Book 11471 Page 1218, Less that portion which lies North of a line which is 60 feet South of and parallel to the center line of Okeechobee-Miami Extension of the Florida East Coast Railway conveyed to Florida East Coast Railway Company by Deed recorded in Deed Book 467 Page 99 of the Public Records of Miami-Dade County, Florida.

**Parcel No.: 04-3013-001-0171**

Address: 801 West 20<sup>th</sup> Street, Hialeah, Florida

Corrective Special Warranty Deed: July 19, 1966, Official Records Book 5141 Page 101

**Legal Description:**

The East  $\frac{1}{2}$  of Tract 17, of FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1, in Section 13, Township 53 South, Range 40 East, according to the Plat thereof, as recorded in Plat Book 2, at Page 17, of the Public Records of Miami-Dade County, Florida, Less the South 20 feet and less the portion of PARCEL 7H 400.74 conveyed to the Metropolitan Dade County, recorded in Official Records Book 11487 Page 502 of the Public Records of Miami-Dade County, Florida.

**Parcel No.: 04-3013-001-0172**

Address: 875 West 20<sup>th</sup> Street, Hialeah, Florida

Warranty Deed: September 17, 1959, Official Records Book 1642 Page 133

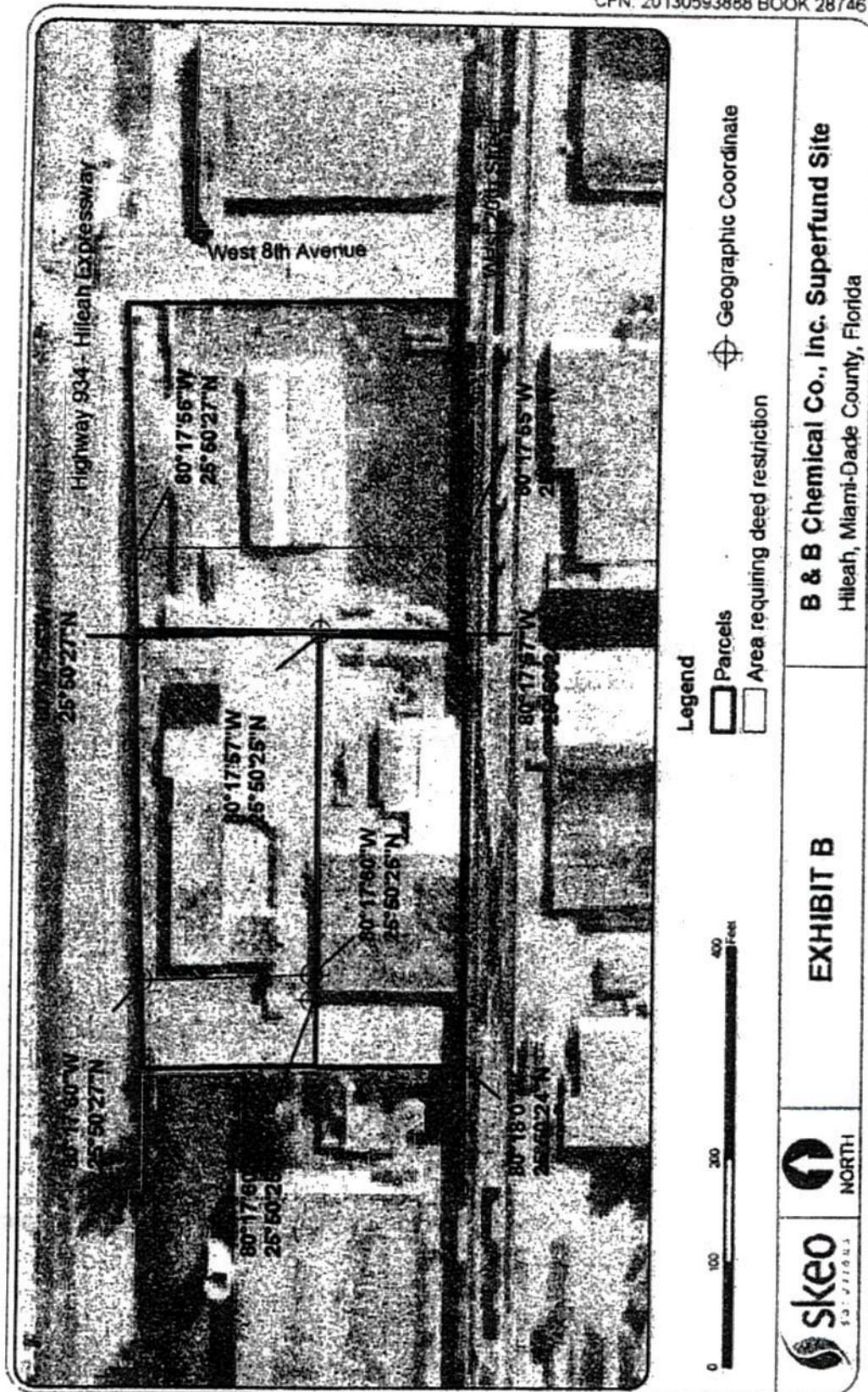
**Legal Description:**

The East  $\frac{1}{2}$  of Tract 17, of FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1, in Section 13, Township 53 South, Range 40 East, according to the Plat thereof, as recorded in Plat Book 2, at Page 17, of the Public Records of Miami-Dade County, Florida, And the portion of a 60 foot right-of-way known as West 9<sup>th</sup> Avenue running from West 20<sup>th</sup> Street to West 21<sup>st</sup> Street, being the West 30 feet of the East  $\frac{1}{2}$  of Tract 17 and the East 30 feet of the West  $\frac{1}{2}$  of Tract 17, by Ordinance No. 82-44 filed June 16, 1982, recorded in Official Records Book 11471 Page 1218.

**LESS:**

The East  $\frac{1}{2}$  of said Tract 17 thereof, and less the North  $\frac{1}{2}$  of the West  $\frac{1}{2}$  of the East 660 feet of said Tract 17, and less the West 30 feet of the East  $\frac{1}{2}$  of Tract 17.





## Appendix F: Interview Forms

<u>B&amp;B Chemical Co., Inc. Superfund Site</u>		<u>Five-Year Review Interview Form</u>	
Site Name:	<u>B&amp;B Chemical Co., Inc.</u>	EPA ID No.:	<u>FLD004574190</u>
Interviewer Name:	<u>Shelby Johnston</u>	Affiliation:	<u>EPA</u>
Subject Name:	<u>Bryan Brock</u>	Affiliation:	<u>B&amp;B Chemical Co., Inc. Owner and President</u>
Subject Contact Information:	<u>N/A</u>		
Time:	<u>10:00 A.M.</u>	Date:	<u>02/02/2017</u>
Interview Location:	<u>B&amp;B Chemical Co., Inc. Site</u>		
Interview Format (circle one):	In Person	<u>Phone</u>	Mail Other:

Interview Category: Site Owner

1. What is your overall impression of the remedial activities at the Site?  
The remedial activities have been done and have gone smoothly.
2. What have been the effects of this Site on the surrounding community, if any?  
There have been no effects on the surrounding community. The surrounding area is industrial.
3. What is your assessment of the current performance of the remedy in place at the Site?  
I think the remedy is performing as intended.
4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?  
No.
5. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?  
It has been so long since any remedial activities have happened at the site. EPA is keeping me informed about site actions.
6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?  
No.



**B&B Chemical Co., Inc. Superfund Site****Five-Year Review Interview Form**Site Name: B&B Chemical Co., Inc.EPA ID No.: FLD004574190Interviewer Name: Shelby JohnstonAffiliation: EPASubject Name: Theresa PepeAffiliation: FDEP

Information:

Time: 1:40 PMDate: 08/15/2017

Interview

B&B Chemical Co., Inc. Superfund Site

Location:

Interview Format:

In Person

Phone

Mail

Other: Email

Interview

State Agency

Category:

1. What is your overall impression of the project; including cleanup, maintenance, and reuse activities (as appropriate)?  
The Site has met ROD cleanup goals and FDEP is satisfied. The Site is ready for deletion after final implementation of ICs.
2. What is your assessment of the current performance of the remedy in place at the Site?  
The remedy is complete.
3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?  
None at all.
4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.  
FDEP coordinated with EPA about the Institutional Controls and the site delistment.
5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?  
No.
6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?  
The institutional controls were finalized in 2013. No outstanding issues.
7. Are you aware of any changes in projected land use(s) at the Site?  
No.

Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy? Based on soil sampling conducted by the EPA in March 2017, it appears that the site meets UU/UE criteria. Therefore, the Institutional Controls no longer seem necessary and can be lifted upon the property owner's request.

**B&B Chemical Co., Inc. Superfund Site****Five-Year Review Interview Form**Site Name: B&B Chemical Co., Inc.EPA ID FLD004574190

No.:

Interviewer Name: Shelby JohnstonAffiliation: EPASubject Name: Galo JacksonAffiliation: EPA

Subject Contact

Information:

Time: 11:00 A.M.Date: 02/02/2017Interview B&B Chemical Co., Inc. Superfund Site

Location:

Interview Format (circle  
one):In Person

Phone

Mail

Other:

Interview

EPA Remedial Project Manager

Category:

1. What is your overall impression of the project; including cleanup, maintenance, and reuse activities (as appropriate)?  
There has been a good project team. Everyone has been cooperative especially the property owner which has made things easier.
2. What have been the effects of this Site on the surrounding community, if any?  
None that I am aware of.
3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities since the implementation of the cleanup?  
No.
4. What is your assessment of the current performance of the remedy in place at the Site?  
The remedy has been effective. The Site has been deleted.
5. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?  
Yes.
6. Are you aware of any community concerns regarding the Site or the operation and management of its remedy? If so, please provide details.  
No.
7. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?  
No.



## Appendix G: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST			
I. SITE INFORMATION			
Site Name: <b>B&amp;B Chemical Co., Inc.</b>		Date of Inspection: <b>01/27/2012</b>	
Location and Region: <b>Hialeah, FL Region 4</b>		EPA ID: <b>FLD004574190</b>	
Agency, Office or Company Leading the Five-Year Review: <b>Skeo Solutions</b>		Weather/Temperature: <b>Sunny, 82 degrees F</b>	
<b>Remedy Includes: (Check all that apply)</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Landfill cover/containment  <input type="checkbox"/> Access controls  <input checked="" type="checkbox"/> Institutional controls  <input type="checkbox"/> Ground water pump and treatment  <input type="checkbox"/> Surface water collection and treatment  <input checked="" type="checkbox"/> Other: <u>asphalt/concrete pavement cover over historically contaminated area</u> </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Monitored natural attenuation  <input type="checkbox"/> Ground water containment  <input type="checkbox"/> Vertical barrier walls </div> </div>			
<b>Attachments:</b> <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			
II. INTERVIEWS (check all that apply)			
1. Owner of Facility	<u>Bryan Brock</u> Name	<u>B&amp;B Chemical Co., Inc. Owner and President</u> Title	<u>01/20/2017</u> Date
Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input checked="" type="checkbox"/> by phone    Phone: _____ Problems, suggestions <input type="checkbox"/> Report attached: <u>Yes</u>			
2. O&M Staff	<u>N/A</u> Name	_____ Title	<u>mm/dd/yyyy</u> Date
Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone    Phone: _____ Problems/suggestions <input type="checkbox"/> Report attached: _____			

3. **Local Regulatory Authorities and Response Agencies** (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply.

Agency EPA

Contact Galo Jackson  
Name

Remedial  
Project  
Manager  
Title

2/2/2017  
Date

404-562-8937  
Phone No.

Problems/suggestions ☐ Report attached: Yes

Agency Florida Department of Environmental Protection

Contact Theresa Pepe  
Name

Project  
Manager  
Title

2/2/2017  
Date

850-245-8927  
Phone No.

Problems/suggestions ☐ Report attached: Yes

Agency EPA

Contact Shelby Johnston  
Name

Current Site  
RPM

2/2/2017  
Date

404-562-8287  
Phone No.

Problems/suggestions ☐ Report attached: yes

4. **Other Interviews** (optional) N/A ☒ Report attached: \_\_\_\_\_

### III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)

1. **O&M Documents**

<input type="checkbox"/> O&M manual	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Maintenance logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A

Remarks: \_\_\_\_\_

2. **Site-Specific Health and Safety Plan**

<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date
		<input checked="" type="checkbox"/> N/A

Remarks: \_\_\_\_\_

3. **O&M and OSHA Training Records**

<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
--	-------------------------------------	---

Remarks: \_\_\_\_\_

4. **Permits and Service Agreements**

<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits: _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A

Remarks: \_\_\_\_\_



5.	<b>Gas Generation Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____				
6.	<b>Settlement Monument Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____				
7.	<b>Ground Water Monitoring Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____				
8.	<b>Leachate Extraction Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____				
9.	<b>Discharge Compliance Records</b>			
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____				
10.	<b>Daily Access/Security Logs</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: <u>The site has an existing business operating on the property and is secure and limits access at all times.</u>				
<b>IV. O&amp;M COSTS</b>				
1.	<b>O&amp;M Organization</b>			
	<input type="checkbox"/> State in-house	<input type="checkbox"/> Contractor for state		
	<input type="checkbox"/> PRP in-house	<input type="checkbox"/> Contractor for PRP		
	<input type="checkbox"/> Federal facility in-house	<input type="checkbox"/> Contractor for Federal facility		
	<input type="checkbox"/> _____			
2.	<b>O&amp;M Cost Records</b>			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date		
	<input type="checkbox"/> Funding mechanism/agreement in place	<input type="checkbox"/> Unavailable		
	Original O&M cost estimate: 0 <input type="checkbox"/> Breakdown attached			
	Total annual cost by year for review period if available			
	From: <u>mm/dd/yyyy</u>	To: <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
	Date	Date	Total cost	
	From: <u>mm/dd/yyyy</u>	To: <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
	Date	Date	Total cost	
3.	<b>Unanticipated or Unusually High O&amp;M Costs during Review Period</b>			
Describe costs and reasons: <u>N/A</u>				
<b>V. ACCESS AND INSTITUTIONAL CONTROLS</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A				
<b>A. Fencing</b>				

1.	<b>Fencing Damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Gates secured	<input type="checkbox"/> N/A
Remarks: <u>Perimeter wall and gates function as necessary.</u>				
<b>B. Other Access Restrictions</b>				
1.	<b>Signs and Other Security Measures</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A	
Remarks: _____				
<b>C. Institutional Controls (ICs)</b>				
1.	<b>Implementation and Enforcement</b>			
	Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
	Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
	Type of monitoring (e.g., self-reporting, drive by): <u>N/A</u>			
	Frequency: _____			
	Responsible party/agency: _____			
	Contact _____	_____ <u>mm/dd/yyyy</u> _____		
	Name	Title	Date	Phone no.
	Reporting is up to date		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Reports are verified by the lead agency		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Specific requirements in deed or decision documents have been met		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
	Violations have been reported		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Other problems or suggestions: <input type="checkbox"/> Report attached			
2.	<b>Adequacy</b>	<input type="checkbox"/> ICs are adequate	<input checked="" type="checkbox"/> ICs are inadequate	<input type="checkbox"/> N/A
Remarks: <u>ICs in the form of deed restrictions are in place so that future owners (1) maintain the integrity of the pavement cover, (2) take appropriate precautions during construction to prevent vapor intrusion and (3) use site property for industrial or commercial land use.</u>				
<b>D. General</b>				
1.	<b>Vandalism/Trespassing</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident	
Remarks: _____				
2.	<b>Land Use Changes On Site</b>	<input checked="" type="checkbox"/> N/A		
Remarks: _____				
3.	<b>Land Use Changes Off Site</b>	<input checked="" type="checkbox"/> N/A		
Remarks: _____				
<b>VI. GENERAL SITE CONDITIONS</b>				
<b>A. Roads</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A				
1.	<b>Roads Damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A
Remarks: _____				

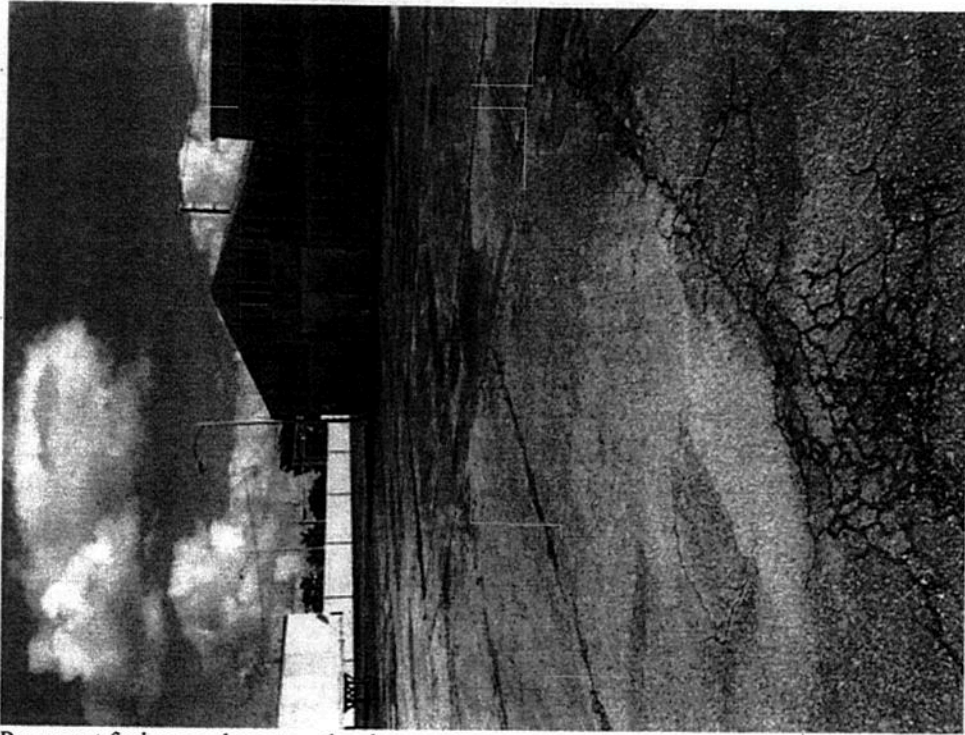


<b>B. Other Site Conditions</b>			
Remarks: _____			
<b>VII. LANDFILL COVERS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>B. Benches</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>C. Letdown Channels</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>D. Cover Penetrations</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	<b>Gas Vents</b> <input checked="" type="checkbox"/> N/A		
2.	<b>Gas Monitoring Probes</b> <input checked="" type="checkbox"/> N/A		
3.	<b>Monitoring Wells (within surface area of landfill)</b> <input checked="" type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A Remarks: <u>Ground water cleanup goals have been reached and monitoring is no longer required.</u>		
4.	<b>Extraction Wells Leachate</b> <input checked="" type="checkbox"/> N/A		
5.	<b>Settlement Monuments</b> <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input checked="" type="checkbox"/> N/A Remarks: _____		
<b>E. Gas Collection and Treatment</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>F. Cover Drainage Layer</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>G. Detention/Sedimentation Ponds</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>H. Retaining Walls</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>I. Perimeter Ditches/Off-Site Discharge</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>VIII. VERTICAL BARRIER WALLS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>IX. GROUND WATER/SURFACE WATER REMEDIES</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
<b>A. Ground Water Extraction Wells, Pumps and Pipelines</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>B. Surface Water Collection Structures, Pumps and Pipelines</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>C. Treatment System</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>D. Monitoring Data</b> N/A			
<b>E. Monitored Natural Attenuation</b>			
1.	<b>Monitoring Wells (natural attenuation remedy)</b> <input checked="" type="checkbox"/> N/A Remarks: <u>Groundwater monitoring has been completed.</u>		
<b>X. OTHER REMEDIES</b>			
If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
<b>XI. OVERALL OBSERVATIONS</b>			
<b>A. Implementation of the Remedy</b>			

	<p>Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions).</p> <p><u>The remedy functions effectively as intended. The asphalt/concrete pavement cover functions as designed to divert water from penetrating the historical area of contamination. Groundwater monitoring is no longer required or conducted at the Site since the MCLs were achieved prior to the previous FYR.</u></p>
<b>B.</b>	<b>Adequacy of O&amp;M</b>
	<p>Describe issues and observations related to the implementation and scope of O&amp;M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.</p> <p><u>O&amp;M is not required except for ensuring the integrity of the asphalt/concrete pavement. This area does not currently require any maintenance.</u></p>
<b>C.</b>	<b>Early Indicators of Potential Remedy Problems</b>
	<p>Describe issues and observations such as unexpected changes in the cost or scope of O&amp;M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p><u>Institutional controls will ensure that current/ future Site owners consider maintenance of the asphalt/ concrete pavement cover, land use restrictions and vapor intrusion during any new construction on site.</u></p>
<b>D.</b>	<b>Opportunities for Optimization</b>
	<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p><u>N/A</u></p>



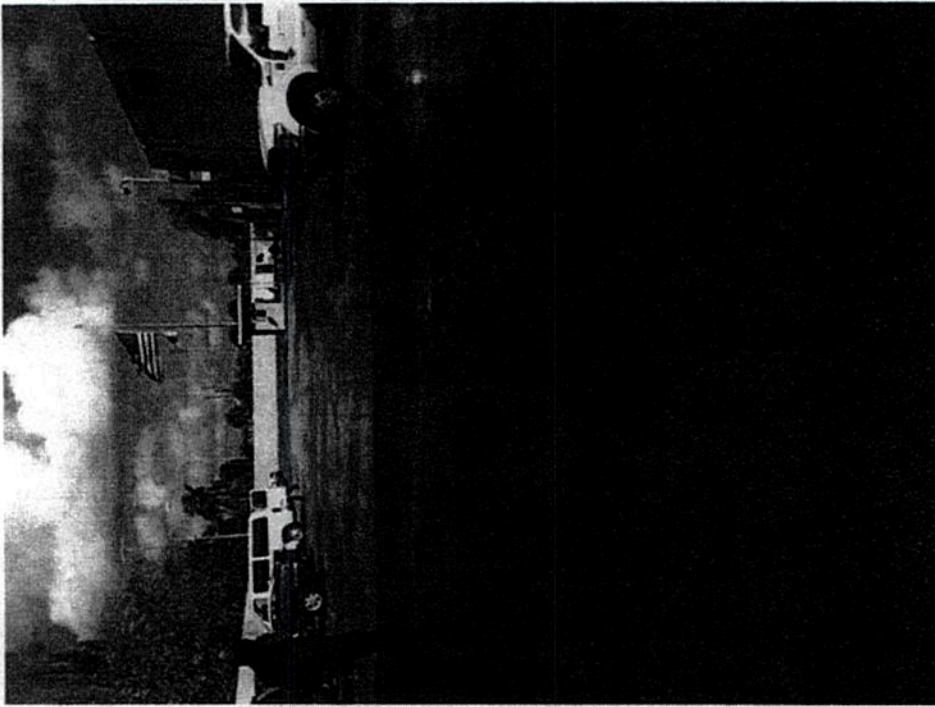
## Appendix H: Photographs from Site Inspection Visit



Pavement facing southwest on the site.



Pavement and buildings facing east.



Asphalt/concrete pavement cover. Facing east toward gated entrance to the Site.



Inactive monitoring well located on site along the southern wall. Typical of the site.





Table 2. Soil Analytical Results for Metals.

				Station ID	BBCC01	BBCC02	BBCC03	BBCC04	BBCC05	BBCC05
				Sample ID	BBCC01SS0317	BBCC02SS0317	BBCC03SS0317	BBCC04SS0317	BBCC05SS0317	BBCC05SS0317
				Matrix	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil
				Sample Date	3/21/2017 10:15	3/21/2017 10:50	3/21/2017 11:20	3/21/2017 11:55	3/22/2017 9:15	3/22/2017 9:40
Analyte	Units	SRGs (*)	RSLs (°)							
Arsenic	mg/kg dry	5	3		1.4	13 ^*	9.4 ^*	31 ^*	5.4 ^*	7.5 ^*
Cadmium	mg/kg dry	—	980		0.26	1.8	0.27	0.29	0.29	0.65
Chromium	mg/kg dry	—	—		14	20	13	5.6	15	57
Chromium, Hexavalent	mg/kg dry	—	6.3		4.4 U	4.7 U	4.8 U	4.7 U	4.6 U	4.5 U
Lead	mg/kg dry	1000	800		11	110	23	26	24	73

U - The analyte was not detected at or above the reporting limit.

Detections are shaded.

Data bold exceed the Site Remedial Goal.

\* The analyte exceeded SRG.

° The analyte exceeded RSL for industrial soils.

Table 3. Soil Analytical Results for SVOCs.

				Station ID	BBCC02	BBCC03	BBCC05	BBCC05
				Sample ID	BBCC02SS0317	BBCC03SS0317	BBCC05SS0317	BBCC05SS0317
				Matrix	Surface Soil	Surface Soil	Surface Soil	Surface Soil
				Sample Date	3/21/2017 10:50	3/21/2017 11:20	3/22/2017 9:15	3/22/2017 9:40
Analyte	Units	RSLs (°)						
Acenaphthylene	mg/kg dry	—			0.480	1.100	0.075 U	0.075 U
Anthracene	mg/kg dry	230000 mg/kg			0.130	0.540 J, O	0.080	0.075 U
Benzo(a)anthracene	mg/kg dry	21 mg/kg			1.500	5.600	0.290	0.095
Benzo(a)pyrene	mg/kg dry	2.1 mg/kg			2.500 ^	9.600 ^	0.310	0.140
Benzo(b)fluoranthene	mg/kg dry	21 mg/kg			3.300	11.000	0.340	0.170
Benzo(g,h,i)perylene	mg/kg dry	—			1.500	6200	170	0.099
Benzo(k)fluoranthene	mg/kg dry	210 mg/kg			2.700	10000	0.330	0.160
Bis(2-ethylhexyl) phthalate	mg/kg dry	160 mg/kg			0.370 U	3.700 U	0.370 U	380 U
Carbazole	mg/kg dry	—			0.041 J, O	0.740 U	0.100	0.075 U
Chrysene	mg/kg dry	2100 mg/kg			2.000	7.200	0.330	0.150
Dibenz(a,h)anthracene	mg/kg dry	2.1 mg/kg			0.550	2.200 ^	0.073 J, O	0.035 J, O
Dibenzofuran	mg/kg dry	1000 mg/kg			0.074 U	0.740 U	0.034 J, O	0.075 U
Fluoranthene	mg/kg dry	30000 mg/kg			1800	5900	0.660	0.230
Fluorene	mg/kg dry	30000 mg/kg			0.074 U	0.740 U	0.039 J, O	0.075 U
Indeno (1,2,3-cd) pyrene	mg/kg dry	21 mg/kg			1.600	5.900	0.170	0.092
Naphthalene	mg/kg dry	17 mg/kg			0.074 U	0.740 U	0.053 J, O	0.075 U
Phenanthrene	mg/kg dry	—			0.067 J, O	0.740 U	0.450	0.073 J, O
Pyrene	mg/kg dry	23000 mg/kg			3.100	9.400	0.560	0.200

U - The analyte was not detected at or above the reporting limit. Detections are shaded. Data bold exceed the Site Remedial Goal.

^ The analyte exceeded RSL for industrial soils. J The identification of the analytical is acceptable; the reported value is an estimate. O Other qualifiers have been assigned providing additional information.



Table 2. Soil Analytical Results for Metals (Continued).

		Station ID	Sample ID	Matrix	Sample Date	BBCC06	BBCC07	BBCC08	BBCC09	BBCCBG
						BBCC06SS0317	BBCC07SS0317	BBCC08SS0317	BBCC09SS0317	BBCCBGSS0317
						Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil
						3/21/2017 15:15	3/22/2017 10:20	3/22/2017 10:50	3/22/2017 11:20	3/22/2017 11:50
Analyte	Units	SRGs (S)	RSLs (S)							
Arsenic	mg/kg drv	5	3			2.9	23 ^	38 ^	5.3 ^	1
Cadmium	mg/kg drv	---	980			0.63	0.19	0.10 U	0.2	0.2
Chromium	mg/kg drv	---	---			67	14	4.6	15	8.1
Chromium Hexavalent	mg/kg drv	---	6.3			5.8	4.5 U	4.2 U	4.9 U	4.1 U
Lead	mg/kg drv	1000	800			4	22	6.6	11	9.7

Analytical Data Qualifiers:

U - The analyte was not detected at or above the reporting limit.

Detections are shaded.

Data bold exceed the Site Remedial Goal.

^ The analyte exceeded SRG.

The analyte exceeded RSL for industrial soils.

Table 3. Soil Analytical Results for SVOCs (Continued).

		Station ID	Sample ID	Matrix	Sample Date	BBCC06	BBCC07	BBCC09	BBCCBG
						BBCC06SS0317	BBCC07SS0317	BBCC09SS0317	BBCCBGSS0317
						Surface Soil	Surface Soil	Surface Soil	Surface Soil
						3/21/2017 15:15	3/22/2017 10:20	3/22/2017 11:20	3/22/2017 11:50
Analyte	Units	RSLs (S)							
Acenaphthylene	mg/kg drv	---				0.073 U	0.690 J, O	0.091 U	0.076 U
Anthracene	mg/kg drv	230000 mg/kg				0.073 U	0.730 U	0.091 U	0.076 U
Benzo(a)anthracene	mg/kg drv	21 mg/kg				0.073 U	2.600	0.050 J, O	0.076 U
Benzo(a)pyrene	mg/kg drv	2.1 mg/kg				0.073 U	4.200 ^	0.067 J, O	0.043 J, O
Benzo(b)fluoranthene	mg/kg drv	21 mg/kg				0.073 U	4.900	0.140	0.062 J, O
Benzo(g,h,i)perylene	mg/kg drv	---				0.073 U	2.400	0.080 J, O	0.043 J, O
Benzo(k)fluoranthene	mg/kg drv	210 mg/kg				0.073 U	5.200	0.088 J, O	0.049 J, O
Bis(2-ethylhexyl) phthalate	mg/kg drv	160 mg/kg				0.390	3.700 U	0.470	0.380 U
Carbazole	mg/kg drv	---				0.073 U	0.730 U	0.091 U	0.076 U
Chrysene	mg/kg drv	2100 mg/kg				0.073 U	3.300	0.110	0.046 J, O
Dibenz(a,h)anthracene	mg/kg drv	2.1 mg/kg				0.073 U	0.950	0.091 U	0.076 U
Dibenzofuran	mg/kg drv	1000 mg/kg				0.073 U	0.730 U	0.091 U	0.076 U
Fluoranthene	mg/kg drv	30000 mg/kg				0.073 U	2.600	0.110	0.043 J, O
Fluorene	mg/kg drv	30000 mg/kg				0.073 U	0.730 U	0.091 U	0.076 U
Indeno (1,2,3-cd) pyrene	mg/kg drv	21 mg/kg				0.073 U	2.400	0.066 J, O	0.036 J, O
Naphthalene	mg/kg drv	17 mg/kg				0.073 U	0.730 U	0.091 U	0.076 U
Phenanthrene	mg/kg drv	---				0.073 U	0.730 U	0.037 J, O	0.076 U
Pyrene	mg/kg drv	23000 mg/kg				0.073 U	4.100	0.100	0.076 U

U - The analyte was not detected at or above the reporting limit. Detections are shaded. Data bold exceed the Site Remedial Goal.

^ The analyte exceeded RSL for industrial soils. J The identification of the analytical is acceptable; the reported value is an

estimate. O Other qualifiers have been assigned providing additional information.

## APPENDIX J –MARCH 2017 SOIL SAMPLING RISK ASSESSMENT MEMORANDUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

July 11, 2017

### MEMORANDUM

**SUBJECT:** Analytical Data from March 2017  
B&B Chemical Site  
Hialeah, Dade County, Florida

**FROM:** Sydney Chan, Life Scientist *SC*  
Scientific Support Section

**TO:** Shelby Johnson, Remedial Project Manager  
Site Assessment Section

**THRU:** Glenn Adams, Chief *GA*  
Scientific Support Section

Per your request, Scientific Support Section (SSS) has reviewed the analytical data you provided for the B&B Chemical Site, Hialeah, Dade County, Florida. The data were collected in March 2017 and includes the results of surface soil only.

### **Data Review**

Surface soil samples were collected March 21<sup>st</sup> and 22<sup>nd</sup>, 2017. Analysis of surface soil samples were performed for Total Metals, Semi Volatile Organics, and Volatiles. All analytes detected were screened against residential soil Regional Screening Levels (RSLs). Contaminants that exceeded residential RSLs were then screened against Industrial RSLs.

### *Metals*

Metal were analyzed using EPA Method 200.8, but the analysis only included Arsenic, Cadmium, Chromium, Hexavalent Chromium, and Lead. All arsenic detected were within EPA's acceptable risk range based on exposure to residential soils. There was one detection of arsenic above a residential hazard index (HI) of 1. Using a calculated 95% UCL (upper confidence limit) of all arsenic results, the concentration would be below a residential HI of 1. All arsenic detected were also within EPA's acceptable risk range based on risk exposure to commercial workers and below a worker scenario HI of 1. All cadmium, chromium, hexavalent chromium, and lead concentrations were within EPA's acceptable risk range and/or below an HI of 1 for residential and industrial exposure scenarios. Please note total chromium detections were screened as chromium (III).

### *Semi Volatile Organics*

Semi Volatile Organics were analyzed using EPA Method 8270D. All semi volatile organics analyzed were within EPA's acceptable risk range and/or below an HI of 1 for residential and industrial exposure scenarios.



*Volatile Organics*

Volatile Organics were analyzed using EPA Method 8260C. All volatile organics analyzed were within EPA's acceptable risk range and/or below an HI of 1 for residential and industrial exposure scenarios.

If you have any questions regarding this review, you can contact me at 404-562-8907 or [chan.sydnev@epa.gov](mailto:chan.sydnev@epa.gov).

